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REMARKS

Entry of this amendment is respectfully requested. Claims 95-113 and 116-123 will be pending. This amendment and response corresponds to the amendment and supplemental amendment filed on 11/9/2006 and 11/14/2006, respectively, with the following exceptions: Claim 123 has been further amended to remove reference to "starting materials" and "by-products." Misspellings have also been corrected in claims 121 and 123. Further, claim 111 has been amended to incorporate the subject matter of claims 114-115, which have been canceled. Applicants maintain that claims 111-113, as amended, are enabled and have sufficient written description. Claim 111, as amended, specifically indicates that reaction is catalyzed with the *L. leichmannii* enzyme.

The Examiner objected to the specification at page 13, lines 6-8, stating that the definition of "n" remains unclear. Applicants have amended the specification to clarify the definition of "n" and request that this objection be withdrawn.

The Examiner also objected to the specification due to the recitation of "EC 2.7.5.6" next to deoxyribomutase. As acknowledged by the Examiner at page 3 of the Office Action, the current EC number associated with deoxyribomutase is "EC 5.4.2.7" not "EC 2.7.5.6." It appears that Applicants used an old enzyme database, which resulted in recitation of "EC 2.7.5.6", which is currently not assigned to any enzyme. The specification has been amended to recite the correct enzyme code. Since "EC 2.7.5.6" was previously used to identify deoxyribomutase, and this amendment serves to correct the error in identification, this does not constitute new matter.

Claims 95 and 103 have been amended in accordance with the Examiner's suggestions as discussed in items 3-4 of the Office Action, and Applicants request that these objections be

withdrawn. The Examiner's suggestions for claim 115 (item 5 of the Office Action) have been incorporated into claim 111, as claim 115 has been canceled.

The Examiner rejected claims 106, 115, 117, and 121-123 under 35 U.S.C. 112, second paragraph, as being indefinite. Regarding claim 106, the Examiner indicates that deoxyribomutase and phosphopentomutase are equivalent (both known as EC 5.4.2.7). The claim has been amended herein to delete deoxyribomutase. Regarding claim 115, the Examiner maintains that "stringent conditions" is indefinite. This claim has been canceled and incorporated into claim 111. Applicants have further specified the stringent conditions for hybridization in claim 111. Support for this amendment is found in the specification at page 12, lines 22-24.

Regarding claim 117, the Examiner is unclear as to which step "the reaction" refers to. Claim 117 has been amended to clarify that the complete reaction of steps (i) to (iii) is carried out without isolating intermediate products.

Regarding claims 121 and 123, the Examiner argues that recitation of the specific materials are indefinite because there is no indication that either material would be a starting material or byproduct of the reaction. Claims 120-122 have been amended to indicate that the starting materials and byproducts are in reference to the reaction to generate GAP (as covered in claim 118). Support for this amendment is found at page 7, line 15 – page 8, line 2, which indicates that GAP should be generated from suitable precursors such as fructose 1,6-diphosphate (FDP), and that deoxyxyulose 1-phosphate (dX1P) is an undesired byproduct of this reaction. Claim 123 has been amended to remove reference to "starting materials" and "by-products" as previously discussed.

Finally, the term "substantial" in claim 122 is considered indefinite because, according to the Examiner, there is no standard in the specification for determining what this term means. Claim 122 has been amended and no longer recites this term.

Based on the foregoing amendments and discussion, Applicants maintain that the rejection of claims 106, 115, 117, and 121-123 under 35 U.S.C. 112, second paragraph, should be withdrawn.

The Examiner has also rejected all pending claims under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, and as not enabled. Claims 95 and 116 have been amended to specify that the methods are for synthesis of purine deoxyribonucleosides and thus, no longer encompass synthesis of any deoxyribonucleoside as argued by the Examiner. Further, claim 116 has been amended to indicate that step (iii) must be enzymatically catalyzed. Based on these amendments, Applicants maintain that there is adequate written description and that the claims are enabled.

Finally, the Examiner rejected claims 116-118 and 120-124 as obvious under 35 U.S.C. 103(a) over Barbas (cited in specification) in view of Baranov et al. (EP 0593757). The Examiner argues that Barbas teaches a process for the production of deoxyribonucleosides and that Baranov teaches removal of the inorganic phosphate. Hence, according to the Examiner, one of skill in the art would be motivated to modify the method of Barbas to remove the inorganic phosphate as disclosed in Baranov.

Claims 116 has been amended to require elimination of inorganic phosphate by substrate phosphorylation. Neither of the cited references, alone or in combination, teach or suggest removal of inorganic phosphate by substrate phosphorylation. The Examiner has conceded this point at page 13 of the Office Action, and further indicated that she has not found any motivation in the prior art for removal of inorganic phosphate by phosphorylation of a substrate in a method for producing deoxyribonucleosides. Hence, the claims as amended are not obvious and the rejection should be withdrawn.

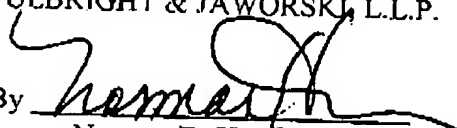
Based on the foregoing, Applicants believe that all outstanding issues have been addressed and that no new issues have been raised. Thus, Applicants respectfully request that the application proceed to allowance.

Applicants reserve the right to pursue those aspects of the invention not covered by the instant claims in one or more divisional applications. A petition for a three month extension of time accompanies this amendment. Authorization is given to charge the fees due with this amendments to deposit account no. 50-0624.

Respectfully submitted,

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